## REMARKS

The Office Action dated February 4, 2009 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto.

Claims 1 and 3-10 are currently pending in the application and are respectfully submitted for consideration.

***Claim Rejections Under 35 U.S.C. § 103(a)***

The Office Action rejected claims 1 and 3-10 under 35 U.S.C. §103(a) as being allegedly unpatentable as obvious over Higaki, *et al.* (U.S. Publication No. 2004/0028260) ("Higaki"), in view of Kuno (U.S. Patent No. 5,467,403) ("Kuno") and Ishii (U.S. Patent No. 6,278,904) ("Ishii"). The Office Action took the position that Higaki discloses all the elements of the claims with the exception of "image transmitting means for transmitting only the cut out portion of the image including the face image to an external terminal," and "means for monitoring state variables comprising a current position of the robot and the image transmitting means transmitting the monitored state variables in addition to the cut out face image." The Office Action then cited Kuno and Ishii as allegedly curing the deficiencies of Higaki. The rejection is respectfully traversed for at least the following reasons.

Claim 1, upon which claims 3-9 are dependent, recites an image transmission system for a mobile robot, which includes a camera for capturing an image as an image signal, and human detecting means for detecting a human from the captured image. The

image transmission system further includes a power drive unit for moving the entire robot toward the detected human, and face identifying means for identifying a position of a face of the detected human. The image transmission system further includes face image cut out means for cutting out a portion of the captured image of the detected human so that the portion of the image includes a face image of the detected human, and image transmitting means for transmitting only the cut out portion of the image including the face image to an external terminal. The image transmission system further includes means for monitoring state variables comprising a current position of the robot, the image transmitting means transmitting the monitored state variables in addition to the cut out face image.

Claim 10 recites an image transmission system for a mobile robot, which includes a camera for capturing an image as an image signal, and human detecting means for detecting a human from the captured image. The image transmission system further includes a power drive unit for moving the entire robot toward the detected human, and image cut out means for cutting out a portion of the captured image so that the portion of the image includes an image of the detected human according to information from the camera. The image transmission system further includes image transmitting means for transmitting only the cut out portion of the image including the human image to an external terminal, and means for monitoring state variables comprising a current position of the robot, the image transmitting means transmitting the monitored state variables in addition to the cut out face image.

As will be discussed below, the combination of Higaki, Kuno, and Ishii fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the features discussed above.

Higaki discusses a posture recognition apparatus which recognizes instructions signified by postures of persons present in the surroundings, from images obtained with an image capture device. Higaki further discusses that the apparatus includes a left side and right side camera 1L and R1 which generate a color image 81, a processing section 5 employing mainly image processing, a setting file 71 in which the relationships between human postures and corresponding instructions are pre-defined, a face database 72 in which human facial recognition information is pre-defined, and a drive control section 9 that controls the drive parts of the apparatus. (See Higaki at paragraph 0041).

Higaki further discusses an image correction processing system 51 which performs corrections of calibration and rectification with respect to the images captured by the cameras 1L and 1R, a 3D image generation section 52 which generates a 3D image 84 from the color image 81, and an outline extraction section 54 which extracts an outline from the 3D image 84. (See Higaki at paragraphs 0042-0043).

Kuno discusses a monitoring system including a robot which has a video camera in its head, and a fixed video camera installed in a sickroom. (See Kuno at col. 3, lines 33-39, and col. 4, lines 8-10). Kuno further discusses electronic diagnosing devices, such as an electronic hemadynamometer and an electrocardiograph also installed in the sickroom. (See Kuno at col. 3, lines 36-40).

The video camera in the robot and the fixed video camera generate video signals representing the image of the subject. The electronic sensors, such as the hemadynamometer and the electrocardiograph, output diagnosis signals, representing the physical conditions of the subject. The video signals and the diagnosis signals are input to a signal processor, and the processor processes these input signals, thereby generating image data and diagnosis data. (See Kuno at col. 4, lines 8-24). The image data and diagnosis data are subsequently displayed on separate consoles. (See Kuno at col. 5, lines 26-30).

Ishii discusses a floating type robot, which includes a floating device which allows an entire robot main body to float in a predetermined space. The robot further includes an image sensor which captures image data of persons around the robot main body. The robot further includes an information processing device which recognizes a specified person based on the image data captured by the image sensor, calculates a position of the specified person, and outputs a control signal for moving the robot main body to the position of the specified person. The robot further includes a propulsion device which moves, based on the control signal, the entire robot main body to a certain position close to the specified person. The robot further includes an image display device which displays image information useful for the specified person. (See Ishii at col. 2, lines 10-26).

Applicants respectfully submit that Higaki, Kuno, and Ishii, whether considered individually or in combination, fail to disclose, teach, or suggest, all of the elements of

the present claims. For example, the combination of Higaki, Kuno, and Ishii fails to disclose, teach, or suggest, at least, "*the image transmitting means transmitting the monitored state variables in addition to the cut out face image*," as recited in independent claims 1 and 10.

As the Office Action correctly concludes, Higaki and Kuno, whether considered individually or in combination, fail to disclose, or suggest, the aforementioned limitation of independent claims 1 and 10. (See e.g. Office Action at page 5). Furthermore, Applicants respectfully submit that Ishii fails to cure the deficiencies of Higaki and Kuno for at least the following reasons.

Ishii discusses a floating robot 10 which includes an image sensor 11, such as a visible, infrared, or ultraviolet sensor. (See Ishii at col. 2, line 60 – col. 3, line 3; Figure 1). Ishii further discusses that the floating robot 10 includes an information processing device 14, such as a microcomputer, that has a GPS function, and that executes information processing and control. (See Ishii at col. 3, lines 7-10; Figure 1). When the floating robot 10 flies in a site such as an airport, the image sensor 11 picks up an image of persons around the robot 10, and if the floating robot 10 discovers a person who stays at the same location for a certain time period, the information processing device 14 recognizes its own position using the GPS function, and the floating robot 10 moves to a location close to the discovered person, so that the person can recognize the floating robot. (See Ishii at col. 3, lines 33-50).

The Office Action alleged that col. 5, lines 10-15 of Ishii disclose the aforementioned limitation of independent claims 1 and 10. (See e.g. Office Action at pages 5-6). Applicants respectfully submit that the Office Action's position is erroneous. The cited portion of Ishii discusses that the information captured through the image sensor 11 of the robot 10 is used for the purpose of detecting a current position of the robot 10, in order for the robot 10 to move around all objects to be monitored or to monitor a specified object. The cited portion further discusses that the information captured through the image sensor 11 is transferred externally through a communication device 19 of the robot 10, and stored in an external device. (See Ishii at col. 5, lines 9-16). Contrary to the Office Action's position, the information captured through the image sensor 11 does not disclose, or suggest, state variables comprising a current position of the robot. Instead, as discussed in Ishii, the information captured through image sensor is the underlying image data picked up by the image sensor 11. (See Ishii at col. 3, lines 36-37).

Applicants respectfully submit the Office Action is taking the phrase "information captured through the image sensor 11 of the robot 10 is used for the purpose of detecting a current position of the robot 10" of Ishii out of context. It is clear from the discussion of Ishii that the information processing device 14 uses the image data of the image sensor 11 and the GPS function to determine a current position of the robot 10. (See Ishii at col. 3, lines 33 – 48). Thus, the image data of the image sensor 11, by itself, does not determine a current position of the robot, and thus, cannot be considered a monitored

state variable comprising a current position of the robot. Because the image data of the image sensor 11 cannot be considered a monitored state variable comprising a current position of the robot, the discussion of transferring information captured through the image sensor 11 to an external device in Ishii, does not disclose, or suggest, transmitting monitored state variables in addition to a cut out face image, where the monitored state variables comprise a current position of the robot.

Furthermore, while the robot 10 may detect a current position by using the GPS function, there is no disclosure in Ishii that the robot 10 transmits this information. As discussed in Ishii, the obtained position information is used by the robot 10 itself to move to a targeted person. (See Ishii at col. 3, lines 45-48). While Ishii discusses that a plurality of floating type robots may share information with one another, Ishii fails to disclose, or suggest, that the obtained position information is shared by different robots or transmitted to any other robot. (See Ishii at col. 5, lines 17-22). Thus, Ishii fails to disclose, or suggest, transmitting monitored state variables in addition to a cut out face image, where the monitored state variables comprise a current position of the robot.

Therefore, for at least the reasons discussed above, the combination of Higaki, Kuno, and Ishii fails to disclose, teach, or suggest, all of the elements of independent claims 1 and 10. For the reasons stated above, Applicants respectfully request that this rejection be withdrawn.

Claims 3-9 depend upon independent claim 1. Thus, Applicants respectfully submit that claims 3-9 should be allowed for at least their dependence upon independent claim 1, and for the specific elements recited therein.

***Double Patenting Rejection***

The Office Action provisionally rejected claims 1 and 10 under the judicially created doctrine of non-statutory obviousness-type double patenting over claim 1 of copending Application No. 10/814,343 in view of Kuno (U.S. Patent No. 5,802,494). Applicants respectfully request that the provisional rejection be held in abeyance until the present application or the co-pending application is in condition for allowance and the claims are in final form.

***Conclusion***

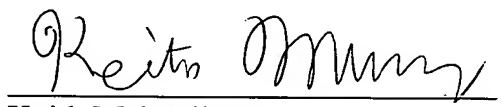
For at least the reasons discussed above, Applicants respectfully submit that the cited prior art references fail to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1 and 3-10 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by

telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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